

Attorney Docket No.: 01CON247P-CON
Application Serial No.: 10/806,800

List of Claims:

Claims 1-29 (Cancelled)

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Claim 30 (Previously Presented): A method for use by a first gateway to establish data communication between a first client modem and a second client modem over a packet network, said method comprising:

receiving a call from said first client modem over a first telephone line;

negotiating, in response to said call, over said first telephone line with said first client modem to establish a first physical modem connection between said first client modem and a first gateway modem of said first gateway;

informing a second gateway of said call over said packet network;

establishing a gateway-to-gateway transport link with said second gateway over said packet network;

determining a set of data link parameters supported by said first client modem, said first gateway modem, a second gateway modem of said second gateway and said second client modem;

establishing a first data link protocol over said first physical modem connection using said set of data link parameters;

wherein data is communicated between said first client modem and said second client modem over an end-to-end reliable connection between said first client modem at one end and said second client modem at the other end, wherein said end-to-end reliable connection uses said set of data link parameters.

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Claim 31 (Previously Presented): The method of claim 30, wherein said second gateway informs said second client modem of said call over a second telephone line, and wherein said second gateway modem negotiates with said second client modem over said second telephone line to establish a second physical modem connection.

Claim 32 (Previously Presented): The method of claim 31, wherein, during said determining, said second gateway modem establishes a second data link protocol over said second physical modem connection using said set of data link parameters.

Claim 33 (Previously Presented): The method of claim 30, wherein said gateway-to-gateway transport link is an unreliable transport link.

Claim 34 (Previously Presented): The method of claim 30, wherein said determining said set of data link parameters includes initiating said first data link protocol and stalling said first data link protocol.

Claim 35 (Previously Presented): The method of claim 34, wherein said first data link protocol is based on ITU V.42 standard.

Claim 36 (Previously Presented): The method of claim 35, wherein said stalling includes transmitting an RNR by said first gateway modem to said first client modem.

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Claim 37 (Previously Presented): The method of claim 36, wherein said determining said set of data link parameters further includes resuming said first data link protocol by transmitting an RR to said first client modem.

Claim 38 (Previously Presented): A first gateway device capable of establishing data communication between a first client modem and a second client modem over a packet network, said first gateway device comprising:

a receiver configured to receive a call from said first client modem over a first telephone line;

a controller configured to negotiate, in response to said call, over said first telephone line with said first client modem to establish a first physical modem connection between said first client modem and a first gateway modem of said first gateway, wherein said controller is further configured to inform a second gateway of said call over said packet network and establish a gateway-to-gateway transport link with said second gateway over said packet network;

wherein said controller is further configured to determine a set of data link parameters supported by said first client modem, said first gateway modem, a second gateway modem of said second gateway and said second client modem, and establish a first data link protocol over said first physical modem connection using said set of data link parameters;

wherein data is communicated between said first client modem and said second client modem over an end-to-end reliable connection between said first client modem at one end and said second client modem at the other end, wherein said end-to-end reliable connection uses said set of data link parameters.

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Claim 39 (Previously Presented): The first gateway device of claim 38, wherein said second gateway informs said second client modem of said call over a second telephone line, and wherein said second gateway modem negotiates with said second client modem over said second telephone line to establish a second physical modem connection.

Claim 40 (Previously Presented): The first gateway device of claim 39, wherein said controller determines said set of data link parameters while said second gateway modem establishes a second data link protocol over said second physical modem connection using said set of data link parameters.

Claim 41 (Previously Presented): The first gateway device of claim 38, wherein said gateway-to-gateway transport link is an unreliable transport link.

Claim 42 (Previously Presented): The first gateway device of claim 38, wherein said determining said set of data link parameters includes initiating said first data link protocol and stalling said first data link protocol.

Claim 43 (Previously Presented): The first gateway device of claim 42, wherein said first data link protocol is based on ITU V.42 standard.

Claim 44 (Previously Presented): The first gateway device of claim 43, wherein said stalling includes transmitting an RNR by said first gateway modem to said first client modem.

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Claim 45 (Previously Presented): The first gateway device of claim 44, wherein said determining said set of data link parameters further includes resuming said first data link protocol by transmitting an RR to said first client modem.

Claim 46 (Previously Presented): A method for use by a first gateway to establish data communication between a first client modem and a second client modem over a packet network, said method comprising:

receiving a call from said first client modem over a first telephone line;

negotiating, in response to said call, over said first telephone line with said first client modem to establish a first physical modem connection between said first client modem and a first gateway modem of said first gateway;

negotiating with said first client modem to establish a first data link protocol over said first physical modem connection;

informing a second gateway of said call over said packet network;

establishing a gateway-to-gateway reliable transport link with said second gateway over said packet network;

wherein said second gateway informs said second client modem of said call over a second telephone line, and wherein a second gateway modem of said second gateway negotiates with said second client modem over said second telephone line to establish a second physical modem connection and further negotiates with said second client modem to establish a second data link protocol over said second physical modem connection; and

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wherein data is communicated between said first client modem and said second client modem over three independent reliable connections including said first data link protocol, said gateway-to-gateway reliable transport link and said second data link protocol.

Claim 47(Previously Presented): The method of claim 46, wherein said gateway-to-gateway reliable transport link uses a different error correction protocol than said first data link protocol and said second data link protocol.

Claim 48 (Previously Presented): The method of claim 46, wherein said first data link protocol uses a different error correction protocol than said second data link protocol.

Claim 49 (Previously Presented): The method of claim 46, wherein said first data link protocol includes data compression.

Claim 50 (Previously Presented): A first gateway device capable of establishing data communication between a first client modem and a second client modem over a packet network, said first gateway device comprising:

a receiver configured to receive a call from said first client modem over a first telephone line;

a controller configured to negotiating, in response to said call, over said first telephone line with said first client modem to establish a first physical modem connection between said first client modem and a first gateway modem of said first gateway, wherein said controller is further configured to negotiate with said first client modem to establish a first data link protocol

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over said first modem link connection, to inform a second gateway of said call over said packet network, and to establish a gateway-to-gateway reliable transport link with said second gateway over said packet network;

wherein said second gateway informs said second client modem of said call over a second telephone line, and wherein a second gateway modem of said second gateway negotiates with said second client modem over said second telephone line to establish a second physical modem connection and further negotiates with said second client modem to establish a second data link protocol over said second physical modem connection; and

wherein data is communicated between said first client modem and said second client modem over three independent reliable connections including said first data link protocol, said gateway-to-gateway reliable transport link and said second data link protocol.

Claim 51(Previously Presented): The first gateway device of claim 50, wherein said gateway-to-gateway reliable transport link uses a different error correction protocol than said first data link protocol and said second data link protocol.

Claim 52 (Previously Presented): The first gateway device of claim 50, wherein said first data link protocol uses a different error correction protocol than said second data link protocol.

Claim 53 (Previously Presented): The first gateway device of claim 50, wherein said first data link protocol includes data compression.

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Claim 54 (Previously Presented): The first gateway device of claim 52, wherein said first data link protocol is based on ITU V.42 standard with a first set of working parameters and said second data link protocol is based on ITU V.42 standard with a second set of working parameters, wherein said first set of working parameters are different from said second set of working parameters.

Claim 55 (Previously Presented): The method of claim 48, wherein said first data link protocol is based on ITU V.42 standard with a first set of working parameters and said second data link protocol is based on ITU V.42 standard with a second set of working parameters, wherein said first set of working parameters are different from said second set of working parameters.